NASA INTEGRATED SPACE OPERATIONS ARCHITECTURE: ANOTHER ASPECT OF REDUCING THE COST OF OPERATIONS

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The NASA Space Operations Office Management Office (SOMO) was described in detail at the 1996 IAF.[1] This paper addresses the issue of changing from a set of individual, NASA Center-focused operations architectures, to an integrated, agency wide operations architecture. The current architecture will be described, but the focus of the paper will be on the NASA Space Operations System (NSOS) Architecture being developed by an agency-wide team of experts representing the disciplines of ground data systems, flight data systems, standards and operations. This team will make a recommendation to the SOMO in late summer of 1997. This recommended architecture will be described. Work to date indicates that the NSOS will emphasize the providing of standard services to missions. Each of these services will specify both performance parameters and cost.

In addition to this effort, two other actions are taking place in parallel and will be described in detail. NASA is moving toward a system of full-cost accounting. This means that each of the missions and projects will be charged for services provided, More importantly, the cost of the service must be estimated during the study phase. This accounting change will lead to the emphasis of real life-cycle costing, which will enable trade-off analysis between flight costs and ground costs. There are also disadvantages. One example would be that the service providers would not have an independent budget. The service providers would have to reach agreements with the set of projects being supported for their income. The advantages and disadvantages of this new approach, which will start in FY 1999, will be discussed.

In March of 1997 an RFP was issued for a Consolidated Space Operations Contractor (CSOC) to support the Agency in space operations. This single contract will replace a dozen or so current contracts that exist at the various NASA Centers and JPL. Those contractors responding to the RFP were awarded a six-month study contract starting in April 1997, to generate a proposal for an Integrated Space Operat ions System. Along with the submittal of the proposed Integrated Operations system by each contractor, they are to submit a transition plan to reach the proposed integrated system along with the proposed cost of operating the system for a ten-year period. The architecture studies may not be proprietary and the status of the studies and the CSOC contract will be discussed.

The paper will conclude with lessons learned to date relative to the approach that NASA is taking with operations relative to the following goals:

1. Consolidate and integrate operations across the Agency to reduce operating costs.

2. Except for core competencies, transition the civil service and JPL/Caltech workforce from routine, day-to-day operations to science, research, and development

3. Transition all operations contracts for products and services to performance-based contracting

4. Transition operations functions that generate products and services to outsourcing, privatization, and ultimately, commercialized services.

5. Restructure management and operational processes using the concept of customer/service provider.

[1] Squibb, O'Neill, Westmoreland, NASA Space Operations Management Office --An Agency Wide Approach To Reduce Operations Costs. 1996 lAF Beijing, China

The above paper has not been presented at another meeting, and much of the content will be based on activities and decisions made during the time between now and the paper submission on August 1, 1997.